



Recycled Glass in Highway Construction

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Recycled Glass in Highway Construction – Overview

Agency of Transportation - Nick Van Den Berg, P.E., Materials Manager

- **Glass Recycling**
 - Challenge
 - Universal Recycling Law – Act 148
- **Processed Glass Aggregate (PGA)**
 - History with VTrans
 - National Standards
 - Regional Standards



Recycled Glass in Highway Construction – Applications

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- **Foamed Glass Aggregate**

- Toured Glavel facility in Essex, VT
- Planned to use in Readsboro Bridge project
- Aero Aggregates will be used in Colchester Exit 17 project

- **Ground Glass Pozzolan**

- Regional sources
- ASTM C 1866 material standard
- Added to Standard Specifications for Construction in April 2022

- **Processed Glass Aggregate**

- Participating in TIDC project headed by UVM;
- Determine appropriate performance requirements
- Substantiate the use of PGA as sand borrow replacement



TIDC Project Page

Recycled Glass in Highway Construction - Processed Glass Aggregate

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- **Unbound Aggregates**

- Engineering properties
- Economy

- **Utilization**

- Availability of resources
- Cost of materials
- Past practice

2016-2021 VTrans Unbound Aggregate Quantities		
Item Name	Unit of Measure	Total Quantity Bid
SAND BORROW	CY	156,214
SUBBASE OF GRAVEL	CY	5,455
SUBBASE OF CRUSHED GRAVEL, COARSE GRADED	CY	4,993
SUBBASE OF CRUSHED GRAVEL, FINE GRADED	CY	12,137
SUBBASE OF DENSE GRADED CRUSHED STONE	CY	324,943
Grand Total		503,742

Recycled Glass in Highway Construction – Initiatives

Agency of Transportation - Nick Van Den Berg, P.E., Materials Manager

- **VTrans**
 - Specification updates
 - Material Acceptance Program updates
 - Research
 - Partnerships



Thank you

